ROCKY MOUNTAIN

Prized for centuries as jewelry and hunting mementos, the modern elk's small canine teeth are remnants of tusks once grown by its prehistoric ancestors. BY ELLEN HOROWITZ



he 80-year-old man leaned against the jewelry counter clutching a quart jar crammed with elk ivories. "I want a pendant made for my granddaughter," he told the jeweler. Without another word, the man unscrewed the lid and guided the flow of teeth across the glass surface.

The jeweler, an avid hunter himself, understood that this collection represented more than elk teeth. It stood for a lifetime of hunting and days spent in wild country with family and friends. They sorted through the drift of teeth until the older man found a large, handsome, amber-hued specimen. After selecting a gold setting to embellish it, ANCIENT TUSKS the jeweler asked if he wanted to sell any ivories or trade for partial payment. The aged hunter slowly swept his thick, curved hand along the countertop. The clinking cascade of canine teeth broke the silence as the jar refilled. "I'll take these with me," he said. "That one is for my granddaughter."

People have collected and treasured elk ivories for hundreds or even thousands of years. After their elk is down, hunters admire their quarry and contemplate the sig-

nificance of the event. At some point many pull back the upper lip and take a look. The ivories—one on each side of the upper jaw come into view like hidden treasures.

For many, saving the ivories is part of an elk hunting tradition passed down through generations. The teeth are a trophy from the hunt, a way to honor the animal that gave up its life. Hold a pair of ivories in your hand and you hold the vestiges of prehistoric tusks, a rich part of the customs and beliefs of native people, and the origins of the National Elk Refuge. Each pair saved by a hunter has its own story and is a new connection between past and present.

Sometimes called tusks, whistlers, or buglers, the canine teeth of wapiti are most commonly known as ivories. Technically, ivory is the term for any animal tusk used as material for art or manufacturing. Elk ivories are indeed tusks, of the same material and chemical composition as those sported by walruses, wild boars, and elephants.

Most people think of tusks as long, pointed teeth rather than the rounded, thumb tip-sized nubs in the upper jaws of elk. These are the tusks of modern wapiti. Their ancestors were armed with fighting tusks used during the rut and as defense against predators. Over millions of years, the canines regressed. Meanwhile, the animals' antlers evolved into large, showy headgear that acted as a defensive tool. Yet even with their tusks shrunk to mere bumps, elk still retain some ancient behaviors associated with the teeth. When an elk curls its

top lip to reveal its ivories, the "sneer" represents a threat posture reminiscent of its prehistoric relatives. Baring canines often precedes charging and striking with antlers or front hooves-the weapons of modern elk.

"Eveteeth" and "dog teeth" are also correct terms for ivories. While many people associate canine teeth with meat eaters, the name refers to their position in the mouth, not dietary preference. "Buglers" or "whistler teeth" have more obscure roots. Harold Picton, professor emeritus of wildlife management at

Montana State University, says the names originate in folklore. "Some people once thought the elk's whistle, or bugle, came from its canine teeth," he says. Picton explains that in old elk, particularly bulls, the canines can wear so severely it's possible to see through the pulp cavity. Hunters postulated that an elk's musical sounds were made as air was forced through a pinheadsized hole in the canines.



REMNANTS OF AN ANCIENT AGE Some primitive cervids, like the Chinese water deer, still sport the long, sharp tusks that modern North American elk possessed eons ago.

REAL IVORY

Both bulls and cows possess ivories. Calves are born with just the tips exposed. The spindly little baby tooth ivories fully emerge during the first winter and then fall out a few months later. The following summer, permanent canines begin to emerge in the top of the elk's mouth. At first the new ivories are hollow and only one-quarter to one-half exposed. It takes several years for them to fully emerge and for the pulp cavity to acquire the dentine that transforms them into solid, rounded tusks. The eyetooth of a large bull, including its thin, flat root, measures about 11/4 inches long by 3/4 inch wide. Less than half the total length is exposed tooth. The canines do not touch any other teeth, but they wear down with a lifetime's worth of vegetation swiping across their surface.

In a landmark study of elk teeth in the 1960s, Montana Fish, Wildlife & Parks biologist Kenneth Greer found a way to identify the sex and age-class of elk by their canine teeth. He determined that, while ivories look identical in male and female calves, tusks from the two sexes of adult elk differ in shape. Cow ivories appear angular, with

16 | SEPTEMBER-OCTOBER 2012 | FWP.MT.GOV/MTOUTDOORS MONTANA OUTDOORS | 17



TREASURED TEETH Above: Elk ivories on an antler base show their thin, tapered roots. The dark concentric circles on top are created by tannins, saliva, and rumination acids. Right: A 1910 photo by Edward S. Curtis shows a Kalispel Indian woman wearing an elk tooth blanket dress. Ivories on clothing enhanced a family's status. Facing page, near: An elk ivory pendant combines gold and diamond with the precious dental remnants. Facing page, far: In the early 1900s, elk ivory watch fobs became a wildly popular yet unofficial emblem of the Benevolent and Protective Order of Elks (B.P.O.E.). The organization denounced the jewelry after poachers began slaughtering elk herds for their ivories.







tapered roots. Bull ivories are generally rounder and larger than those of cows and have blocky, nearly square roots.

Tusks range in color from bone white to chocolate brown. Dark stains forming concentric patterns along the tops of crowns accentuate some teeth. The coloration results from a combination of tannins in vegetation, salivary juices, and rumination acids.

PRIZED POSSESSIONS

A legend of the Hidatsa Indians of today's North Dakota contends that, long ago, wapiti ate people. That angered the spirits, who decided to teach the animals a lesson by removing all their teeth except the ivories. As a result, elk began to starve. Wapiti promised never to eat people if the spirits returned the other teeth. Now when elk die, goes the legend, they give up their tusks.

Elk ivories were prized possessions among members of many Indian tribes, who considered the miniature tusks a symbol of strength, stamina, and longevity. Ivory bracelets, earrings, and chokers were thought to bring

Ellen Horowitz is a writer in Columbia Falls and a long-time contributor to Montana Outdoors. A version of this article originally appeared in Bugle.

health and good luck to those who wore or possessed the jewelry. For men, ivories also signified the owner was a good hunter.

Indians throughout the elk's range in the Great Plains, Rocky Mountains, and Pacific Northwest passed ivories down as heirlooms. Elk canines were sometimes given to newborn babies as good luck charms. Ivories were also made into pendants and necklaces and used as decoration on clothing. Meriwether Lewis noted in his journal on August 21, 1805, "The tusks of the Elk are pierced, strung on a thong and woarn as an orniment for the neck, and is most generally woarn by the women and children." Ivories also embellished medicine pouches, shields, and the harnesses used on dogs and horses. To most Indians, the canines were, in the words of one Gros Ventre man, "like pearls to the whites. They were our while on the Missouri River with Swiss artist greatest decoration."

A woman's dress adorned with elk teeth indicated family status. The Crow were renowned for their elaborately decorated outfits. Edward S. Curtis, the famous photographer of the American West and Native Americans, wrote, "...no self-respecting teeth on clothing, as it was considered too (Crow) man presumed to marry unless he and his family could furnish the elk-teeth necessary to adorn a wife's dress." Three hundred was considered the norm. The teeth

sewn on a woman's dress indicated the father or husband was wealthy enough to trade horses for ivories. A reporter from the Chicago Record-Herald wrote in 1901 that the residents of one Shoshone village in southern Montana possessed roughly 20,000 elk teeth. The writer examined the dresses of a mother and her child adorned with 600

Many Indians placed high value on ivories when trading. The larger, darkerstained teeth of bulls were most prized. Early explorers compared the exchange of elk ivories among Native Americans to a form of currency. In an 1805 account, French explorer François-Antoine Larocque said the Flathead Indians considered a horse worth 70 to 80 elk canine teeth. In 1833, Karl Bodmer, Prince Maximilian of Germany reported that the Mandan valued one horse at 150 tusks. German artist and adventurer Rudolph Kurz noted the price of a pack horse as 100 tusks.

Before the 1870s, men rarely wore elk feminine. Then, in the late 1800s, Native American men began adorning cloth vests with elk teeth. This decoration coincided with increased interest by European-Amer-

icans in elk tooth ornaments and the dissolution of both native traditions and elk populations. As market hunting decimated elk numbers, hand-carved imitations made from bone replaced genuine ivories as bridal dress adornments.

LEFT TO ROT

The craze for elk tusks among nonIndians, which peaked in the 1890s and early 1900s, nearly led to the local extinction of elk. More than a fashion statement, an elk ivory watch fob became a symbol of prestige. It also served as the unofficial emblem of the Benevolent and Protective Order of Elks (B.P.O.E.), whose membership numbered in the hundreds of thousands.

Around Jackson Hole, Wyoming, residents made extra income by selling canine teeth from the two elk they were permitted to kill each year. They garnered additional tusks from animals that died of natural causes. In the mid-1890s, an average pair of ivories sold for roughly \$15 (\$375 in today's dollars) while an outstanding pair brought up to \$100 (\$2,500 today).

With money like that at stake, it didn't take long for a new breed of poachers, dubbed "tuskers," to begin slaughtering elk solely for their ivories. One Jackson Hole res-

ident told of snowshoeing through a remote part of the valley and discovering the bodies of 18 bulls. Only their ivories had been removed. Claims surfaced that tuskers drove elk into snowdrifts and then yanked out ivories from the mired, exhausted animals without bothering to kill them. Other sources indicated that tuskers massacred and left to rot more elk in a single winter "than were" at the start of this story, who have given elk killed in ten years of normal hunting."

In 1907, the Wyoming legislature asked members of the B.P.O.E. to denounce the wearing of elk's teeth as emblems. President Roosevelt reiterated the request. The organization issued a call to members, and the lucrative market for poachers dried up. The B.P.O.E. also became a driving force for protecting elk and establishing the National Elk Refuge as a safe haven for elk wintering in tom-sculpt each piece, following the contours Iackson Hole.

BUTTERY WARM COLORS

Ivories may lack the bragging rights associated with a magnificent rack, but for many people they represent a gorgeous memento from the hunt. They're also a lot easier to show off at a dinner party than 40 pounds of antlers. These days, ivories show up most often in rings, necklaces, bolo ties, earrings, hatbands, pendants, watches, cufflinks, belt

buckles, and tie tacks. Unlike Indians of an earlier age, some people today consider ivories a "male" form of jewelry. After all, ivories are teeth, making them less refined to some minds than precious stones, minerals, and metals. That perspective is not universal, however. I know women who wear elk ivory jewelry, as well as men, like the grandfather ivory as gifts to sweethearts and female family members. Most everyone who appreciates elk also admires the teardrop shape and buttery warm color of ivories. Like snowflakes, ivories also have the attraction of being truly one-of-a-kind, even those from opposite sides of the same animal's mouth. Jewelers who work extensively with elk ivories create repertoires of stock designs, but they still cusof the individual tusk. For elk hunters, there may be no more beautiful or meaningful gem, no finer way to commemorate an exceptional hunt.

Most elk hunters I know save their ivories in little boxes and jars they stash in desk drawers or atop shelves. These small treasures represent a form of wealth not easily gauged except in the stories they help recall stories of hunting and time spent in elk country, stories that link past to present.

18 | SEPTEMBER-OCTOBER 2012 | FWP.MT.GOV/MTOUTDOORS MONTANA OUTDOORS | 19